REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated February 1, 2006. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 2-13 and 18-22 are under consideration in this application. Claims 16-17 are being cancelled without prejudice or disclaimer. Claims 5 and 7 are being amended, as set forth in the above marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim applicants' invention. New claims 20-22 are being added to recite other embodiments described in the specification, especially Fig. 17 and pp. 24-26.

All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formality Rejection

Claim 5 was rejected under 35 U.S.C. §112, second paragraph, for repeating "means for monitoring input/output performance of said partitions".   As indicated, the claims have been amended as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Prior Art Rejections

Claims 5, 10-13 and 16 were rejected under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,226,734 to Kleinsorge et al. (hereinafter "Kleinsorge"), claims 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kleinsorge in view of US Patent No. 6,279,098 to Bauman et al. (hereinafter "Bauman"), and claims 2-4, 7–9 and 17-19 were rejected over Kleinsorge in view of US Patent No. 6,2763,519 to McColl et al. (hereinafter "McColl"). These rejections have been carefully considered, but are most respectfully traversed.

The computer (e.g., Fig. 1) of the invention comprises: one or more CPUs 10-12; a main memory 30; and one or more input/output means 100. 101. The computer is divided into a plurality of partitions.

As now recited in claim 5 (for example, the embodiment depicted in Fig. 19; p. 28), the computer further means for controlling allocation of the input/output means for the partitions, means for monitoring input/output performance of said partitions, means for prescribing an allocation ratio of the input/output means for each of the partitions independently from an allocation ratio of the CPUs set for each of the partitions (recited in the cancelled claim 16), means for automatically changing said prescribed input/output ratio of the input/output means for each of the partitions without mediation of an operator when the input/output performance of said partitions falls to a prescribed level set (*(4) Automatic change of I/O allocation. Based on measured results of I/O performance of partitions and the prescribed change condition of I/O allocation, the partition control program changes the I/O allocation without mediation of an operator.*" P. 28, lines 5-8; Steps 7101-7102) according to a service level agreement (recited in claim 7).

As now recited in claim 7 (for example, the embodiment depicted in Fig. 20; pp. 29-30), the computer further includes means for comparing input/output performance of each partition with a prescribed lower limit level of the partition according to SLA (Service Level Agreement), means for determining whether said input/output performance is less than the lower limit level is caused by a CPU bound or an input/output bound, and means for increasing input/output allocation to said partition when the input/output bound caused said input/output performance to drop to the lower limit level and there is surplus in input/output performance of other partitions.

As now recited in claim 20 (for example, the embodiment depicted in Fig. 17; pp. 24-26), the computer system further includes a software means for logically dividing the computer system into a plurality of partitions each of which includes a subset of the CPUs that works independently from the remaining CPUs or under a time-sharing manner with the remaining CPUs, a subset of the main memory, and a subset of the input/output means 100, 101; means for setting an allocation ratio 7030-7033 (Fig. 7) of the input/output means 100, 101 for each of the partitions independently from an allocation ratio of the CPUs 10-12 set for each of the partitions; monitoring means 7010 (Fig. 17) to monitor values of input/output performance of each of the partitions, and means for changing the allocation ratio of the input/output means for a partition (e.g., from 50% to 75%), when a monitored value of the

input/output performance of said partition falls to a prescribed level (e.g., 500 ms) set according to a service level agreement.

Applicants contend that none of the cited prior art references teaches or suggests a variable valve timing control device having such "means for prescribing an allocation ratio of the input/output means for each of the partitions independently from an allocation ratio of the CPUs set for each of the partitions" or "means for automatically changing said prescribed input/output ratio of the input/output means for each of the partitions when the input/output performance of said partition falls to a prescribed level set according to a service level agreement" according to the invention.

In contrast, Kleinsorge's computer system functioning as a plurality of logical partitions only allocates to each partition the resources including CPUs and memory, and I/O devices, according to the conventional approach descried in background of the specification, e.g., "*controlling the use of I/O adapters indirectly by controlling the CPU power ... by just allocating each partition an I/O capacity in proportion to its CPU capacity* (p. 4, 2nd & 3rd paragraphs)," rather than "setting an allocation ratio of the input/output means for each of partitions independently from an allocation ratio of the CPUs set for each of the partitions" as the invention.

Kleinsorge's general statement that "resources, such as CPUs and memory, can be dynamically assigned to different partitions and used by instances of operating systems running within the machine by modifying the configuration (col. 4, lines 63-66)" does not provide any implementation details, such as "setting an allocation ratio of the input/output means for each of the partitions."

Contrary to the Examiner's assertion (p. 4, lines 2-3 of the outstanding Office Action), Applicants respectfully contend that Kleinsorge does not monitor input/output performance of each of the partitions. The relevant portion cited by the Examiner (col. 27 line 36-51) merely mentions monitoring/examining the "heartbeat" of a distinct copy, or instance, of an operating system (col. 4, lines 49-50) at regular intervals by another copy /instance of the OS to demonstrate if the examined instance/object is still alive (col. 27, lines 16-35), rather than lost via inactivity timeout or a crash. In other words, Kleinsorge only monitors the life or loss of a **static** copy /instance of the OS *in* the APMP database, rather than monitoring any input/output performance, i.e., **dynamic input or output flows** of data objects in/out of each partition. The input/output performance of the invention is further examples in claim 18.

Kleinsorge neither changes the allocation ratio of the input/output means for a partition, when a monitored value of the input/output performance of said partition falls to a prescribed level set according to <u>a service level agreement</u> (SLA). McColl was relied upon by the Examiner to teach an SLA (p. 7, paragraph number 17 of the outstanding Office Action). However, McColl guarantees services for each "<u>job</u>" and the parameters of a job contract (col. 20, line 31 to col. 21, line 1160) do not include "a prescribed level of the <u>input/output performance</u> per a <u>partition</u>."

Bauman was relied upon by the Examiner to teach claim 6 (p.6, paragraph number 13 of the outstanding Office Action). However, Bauman fails to compensate for the deficiencies of Kleinsorge and McColl.
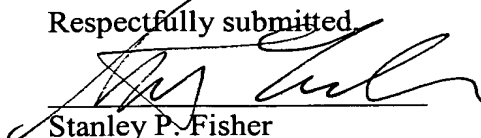
Applicants contend that the cited references or their combinations fail to teach or disclose each and every feature of the present invention as disclosed in the independent claims 5, 7 and 20. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

<u>Conclusion</u>

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely, Applicants respectfully contend that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

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